

## Abstract

The invention relates to a vibration detector for determining and/or monitoring a predetermined fill level in a container. The detector includes an oscillatable unit (2), a driver/receiver unit (6) and an evaluation unit (8). The vibration detector can, additionally, be used as a viscosity sensor or as a density sensor.

For providing a multivariable sensor, a microprocessor (8) is provided in the oscillation circuit (7) formed of oscillatable unit (2) and feedback electronics (9). The microprocessor (8) corrects the phase of the feedback electronics (9) over a predetermined frequency bandwidth in such a way that the sum of the phases of the feedback electronics (9) and the microprocessor (8) follows a predetermined function  $f(v)$ .

(Fig. 1)